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D350-636-021
Job Sheet 187139



Part No: D350-636-021

Job Qty: 1 ea

Part Name: AS350/355 - Skidtube - Standard w/ Standard Wearplates - LH



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 11/28/18

Job Tracking No:

Due Date: 1/9/19

Created By: Jesse White

Type: Stock

Description: SIOP

Note: D2750-051 REV.H / IIN-D350-636 REV.K IPP REV:A 18.11.23 NEW ISSUE DD VERF:JFS

Ship Via:

Bill of Materials

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Container No: S142906



Part: D350-636-021

Job No: 187139

Serial No/Batch: S142906

Revision: H/K

Inspector:

Exp Date:

Instructions: TC STC SH99 -- 7 Issue 2, EASA SR00646SE 15/10/28, EASA STC

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐		DEPARTMENT/PROCESS Skid-tube ☐ Cross tube ☐ Eng. (Non-AW) ☐ Engineering ☐ Machining ☐ Small Fab ☐ Prod. Eng. Coord. ☐ Water Jet ☐ Large Fab ☐ Finishing ☐ Rec/Store/Packaging ☐ Supplier ☐ Quality ☐																															
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Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY <table border="0"><tr><td>☐ Pressure/Forced</td><td>☐ Contamination</td><td>☐ Power Loss/Surge</td><td>☐ Positioned Wrong</td></tr><tr><td>☐ Bending</td><td>☐ Misaligned/off center</td><td>☐ Folio/Program</td><td>☐ Outside Tolerance</td></tr><tr><td>☐ Crushing</td><td>☐ BOM/Route</td><td>☐ Grain Direction</td><td>☐ Drawing</td></tr><tr><td>☐ Cracks</td><td>☐ Broken/Damage/Defect</td><td>☐ Weld</td><td>☐ Finish</td></tr><tr><td>☐ Crimp/Kink/Ripple/Wave/Twist</td><td>☐ Incomplete/Unclear Instructions</td><td>☐ Wrong Stock Pulled</td><td>☐ Part Lost/Missing</td></tr><tr><td>☐ Marks/Chatter</td><td>☐ Drill Holes</td><td>☐ Out of Sequence</td><td>☐ Misread</td></tr><tr><td>☐ Mislabeled</td><td>☐ Fit/Function</td><td>☐ Off-set/Set-up</td><td></td></tr></table>						☐ Pressure/Forced	☐ Contamination	☐ Power Loss/Surge	☐ Positioned Wrong	☐ Bending	☐ Misaligned/off center	☐ Folio/Program	☐ Outside Tolerance	☐ Crushing	☐ BOM/Route	☐ Grain Direction	☐ Drawing	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Finish	☐ Crimp/Kink/Ripple/Wave/Twist	☐ Incomplete/Unclear Instructions	☐ Wrong Stock Pulled	☐ Part Lost/Missing	☐ Marks/Chatter	☐ Drill Holes	☐ Out of Sequence	☐ Misread	☐ Mislabeled	☐ Fit/Function	☐ Off-set/Set-up	
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Other/Details: 																																			

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea		1/9/19	0.00	0.00	Start Up Skidtubes-1		TF
110	Skidtubes	1 pcs		1/9/19	0.00	4.55	Skidtubes-4		TF
120	QC	1 pcs		1/9/19	0.00	0.00	QC10		38
130	QC	1 pcs		1/9/19	0.00	0.00	QC5		9-89 DAS 38
140	HandFinish	1 pcs		1/9/19	0.00	0.93	HandFinish1		DR 19/01/15
150	QC	1 pcs		1/9/19	0.00	0.00	QC7-2		MG
160	Skidtubes	1 pcs		1/9/19	0.00	4.55	Skidtubes-4		38
170	QC	1 pcs		1/9/19	0.00	0.00	QC10		38
180	QC	1 pcs		1/9/19	0.00	0.00	QC5		9-89 38
190	HandFinish	1 pcs		1/9/19	0.00	0.93	HandFinish2		DR 19/01/15
200	SprayPaint	1 pcs		1/9/19	0.00	0.91	Spray Paint		R.O. 19-2-11
205	Outsource	1 pcs		1/9/19			ATE003-VC	5	NR
210	QC	1 pcs		1/9/19	0.00	0.00	QC14		19-2-15
230	HandFinish	1 pcs		1/9/19	0.00	0.93	HandFinish4		19-3-10 DAS
240	QC	1 pcs		1/9/19	0.00	0.00	QC5		APR 02 2019 68
250	Packaging	1 pcs		1/9/19	0.00	0.00	Packaging1-3		DAS APR 02 2019-89
260	QC	1 pcs		1/9/19	0.00	0.00	QC4		46 DAS APR 02 2019
270	Packaging	1 pcs		1/9/19	0.00	0.00	Packaging3-1		DAS 9-89 46 APR 02 2019
275	DC	1 pcs		1/9/19	0.00	0.00	DC		21 9-89 APR 02 2019
280	QC21-FG	1 Ea		1/9/19	0.00	0.00	QC21		9-89 APR 02 2019

Part Op 110 - 1- Pick D2600-3 Bent 2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg
 Descriptions: D2750-5 3- Drill pilot holes for blade fitting bolt holes using DT8983. Start with 3/16", then open to 0.500" using center drill

then ream holes using 0.500" reamer. PIN first side. Repeat process on second side. ***ENSURE PROPER POSITIONING FWD BEND MUST BE FACING UP WHEN DRILLING FIRST SIDE*** Drill pilot holes as per Dwg D2750 sheet 4 (D2750-5 details). Drill using drill Jig DT8150 & DT8863A for 2nd side only DT8863B for first side 4- Locate DT8330 off of blade fitting bolt holes and drill pilot holes for blade fitting. Open to 0.500" using hole saw. VERIFY AND RECORD FWD BEND ANGLE. 5-Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to 0.297". 6-Open up holes of Detail BF to 0.297" (total of 2 holes per side) and one 0.201" each side as per dwg 7-Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left from bending as per QSI 004 A/R Aluminum Rod batch: 138189 8-Grind welds flush as per Dwg D2750

160 - 1-Open up holes using hole saw of Detail BG and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750. 4-Chamfer holes of Detail BG, ground handling and float holes per dwg D2750 (welding instructions on sheet 8) 5- Deburr and blow out all chips from inside of tube 6- Prepare tube for welding, remove alodine as required. 7-Bond web D2739 in place as per QSI 015, let cure for 12hrs. A/R Sikaflex-291 batch: 113884 exp. date: 03/07/19 ***ATTN: USE I-BEAM LOCATION AID (BLADE FITTING)*** 8- Weld spacers D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 15) A/R Aluminum Rod batch: 138189 10-Grind welds flush as per Dwg D2750 11-Spot face ground handling holes section CS-CS (total of 4 places per side) as per dwg D2750 12-Deburr holes, ensure tube is free of all scratches before sending to paint.

180 - ***VERIFY C'BOARD IS GOOD***

190 - Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

200 - 1- PRIME AS PER DWG AND QSI 005 4.2 PRIMER PRC DESOTO 515X349 BATCH: 5173794 2- PAINT WHITE AS PER DWG AND QSI 005 4.2 PAINT BATCH: 5146086

210 - Inspect for foreign object per QSI 024

230 - 1- Install inserts as per Dwg D2750 2-Inspect for Foreign Objects 3- Install blade fitting D3488-3, wearshoes and ground handling hardware as per dwg D2750 SIKA FLEX 241 BATCH: 5138855 EXP DATE: 19-3 5- Coat all exposed fasteners with "LPS Procyon" batch: 14133690

260 - *****ensure antiseize is on AN8C21A bolts*****

270 - Package as per PPP-D350-636-021 Location : FG108

275 - record fwd angle: 89.8 Photocopy blue file and type labels per PPP D350-636-021 CHG 001

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

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Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐		
Date :	Sequence #:	QTY Affected :		MRB (QSI042)
Description Work Order Deviation		Disposition		Completed By
				Lead hand / Supervisor
				QC / QA Coordinator
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread		
Other/Details:				

Job BOM

008066

Part / Item	Component Name	Quantity	Operation	Container
D2600-3-BENT-LH	Extrusion Bent LH	1 Ea (1 ea)	90-Start up Operation	5129373
D2744	Cap	1 Ea (1 ea)	110-Skidtubes	5060499
D2739	350 I-Beam	1 Ea (1 ea)	160-Skidtubes	5140949
D2743	Crossbolt Spacer	8 Ea (8 ea)	160-Skidtubes	5133720
AN3C5A	Bolt	34 Ea (34 ea)	230-HandFinish	5075999
AN3C6A	Bolt	4 Ea (4 ea)	230-HandFinish	5142453
AN6C44A	Bolt	4 Ea (4 ea)	230-HandFinish	5142455
AN8C35A	Bolt	1 Ea (1 ea)	230-HandFinish	5142143
D2745	Bushing	8 Ea (8 ea)	230-HandFinish	5137492
D3488-3	Blade Fitting, LH	1 Ea (1 ea)	230-HandFinish	5148053
D3537-1	Wearpad	3 Ea (3 ea)	230-HandFinish	5108000
D3631-1	Washer	8 Ea (8 ea)	230-HandFinish	5052407
D3791-1	Wearpad	1 Ea (1 ea)	230-HandFinish	5142099
D3793-1	Wearplate Fwd	1 Ea (1 ea)	230-HandFinish	5141967
D3793-3	Wearplate Aft	1 Ea (1 ea)	230-HandFinish	5132951
MS21043-6	Nut	4 Ea (4 ea)	230-HandFinish	51093614
MS21083C8	Nut	1 Ea (1 ea)	230-HandFinish	5104046
NAS1149C0332R	Washer 5124666 x10	38 Ea (38 ea)	230-HandFinish	5140516 (28)
NAS1149C0832R	Washer	1 Ea (1 ea)	230-HandFinish	5076617-2
NAS1515H3L	Washer	4 Ea (4 ea)	230-HandFinish	5083559
ALS4-1032-225	Rivnut	38 Ea (38 ea)	230-HandFinish	5058138
AN3C34A	Bolt	1 Ea (1 ea)	230-HandFinish	5117121
D3793-5	Wearshoe	1 Ea (1 ea)	230-HandFinish	5132449
MS21043-3	Nut	1 Ea (1 ea)	230-HandFinish	5094569
NAS1149C0363R	Washer	2 Ea (2 ea)	230-HandFinish	5135100
AN8C21A	Bolt	2 Ea (2 ea)	250-Packaging	5156680
D2741	Replacement Blade	1 Ea (1 ea)	250-Packaging	5129315
MS21083C8	Nut	2 Ea (2 ea)	250-Packaging	5152948
NAS1149D0863J	Washer	2 Ea (2 ea)	250-Packaging	5133789

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D2600-3-BENT-LH	1	16	0
110-Skidtubes	D2744	1	20	0
160-Skidtubes	D2739	1	17	0
	D2743	8	39	0
230-HandFinish	ALS4-1032-225	38	1,319	0
	AN3C34A	1	20	0
	AN3C5A	34	1,502	0
	AN3C6A	4	165	0
	AN6C44A	4	103	0
	AN8C35A	1	34	0
	D2745	8	103	0
	D3488-3	1	10	0
	D3537-1	3	204	0
	D3631-1	8	407	0
	D3791-1	1	16	0
	D3793-1	1	15	0
	D3793-3	1	13	0
	D3793-5	1	0	0
	MS21043-3	1	886	0
	MS21043-6	4	109	0
	MS21083C8	1	121	0
	NAS1149C0332R	38	3,530	0
	NAS1149C0363R	2	99	0
	NAS1149C0832R	1	370	0
	NAS1515H3L	4	405	0
250-Packaging	AN8C21A	2	73	0
	D2741	1	85	0
	MS21083C8	2	121	0
	NAS1149D0863J	2	72	0

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

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Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

Part Specifications

Specifications could not be found.

Plex 11/28/18 9:28 AM dart.white.jesse

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
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Other/Details:					

QTY -041	QTY -042	QTY -043	QTY -044	QTY -051	QTY -052	P/N	DESCRIPTION
X						D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X					D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X				D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X			D2750-044	350 SKIDTUBE ASSEMBLY, RH
				X		D2750-051	350 SKIDTUBE ASSEMBLY, LH
					X	D2750-052	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	1	1	D2739	WEB
8	8	8	8	8	8	D2743	CROSS BOLT SPACER
1	1	1	1	1	1	D2744	CAP
8	8	8	8	8	8	D2745	BUSHING
1						D2750-1	350 SKIDTUBE ASSEMBLY
	1					D2750-2	350 SKIDTUBE ASSEMBLY
		1				D2750-3	350 SKIDTUBE ASSEMBLY
			1			D2750-4	350 SKIDTUBE ASSEMBLY
				1		D2750-5	350 SKIDTUBE ASSEMBLY
					1	D2750-6	350 SKIDTUBE ASSEMBLY
1		1		1		D3488-3	BLADE FITTING, LH
	1		1		1	D3488-4	BLADE FITTING, RH
4	4	4	4			D3490-1	CROSS BOLT SPACER
4	4					D3490-3	CROSS BOLT SPACER
		4	4			D3490-5	CROSS BOLT SPACER
8	8	8	8			D3492-041	PLUG
8	8					D3492-043	PLUG
		8	8			D3492-045	PLUG
3	3	3	3	3	3	D3537-1	WEARPAD
8	8	8	8	8	8	D3631-1	WASHER
1	1	1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	1	1	D3793-5	WEARSHOE
38	38	38	38	38	38	ALS4-1032-225	INSERT
				1	1	AN3C34A	BOLT
34	34	34	34	34	34	AN3C5A	BOLT
4	4	4	4	4	4	AN3C8A	BOLT
4	4	4	4	4	4	AN6C44A	BOLT
1	1	1	1	1	1	AN8C35A	BOLT
				1	1	MS21043-3	NUT
4	4	4	4	4	4	MS21043-6	NUT
1	1	1	1	1	1	MS21083C8	NUT
38	38	38	38	38	38	NAS1149C0332R	WASHER
				2	2	NAS1149C0363R	WASHER
1	1	1	1	1	1	NAS1149C0832R	WASHER
4	4	4	4	4	4	NAS1515H3L	WASHER

NOTES:

- 1) MATERIAL: MAKE D2750-1/-2/-3/-4/-5/-6 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- 2) FINISH: ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
STANDARD: PRIME (REF. 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2
OPTIONAL: POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: D2750-041/-042/-043/-044 = 26.1 lbs
D2750-051/-052 = 25.7 lbs
- 8) WELD PER DART QSI 004
- 9) INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 19/64" SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- 10) FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- 11) COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS OFF FINISH WITH MEK DEGREASER.
- 12) SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- 13) SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

H	ADDED -051/-052 (ZN D5-1 SHEETS 4, 15-16); ADDED D2750-5/-6 (ZN C5-1 SHEETS 9, 10); D3488-3/-4 REPLACES D3488-041/-042 (ZN C5-1, D2-11/-12/-13/-14); D3793-5 REPLACES D3535-25 (ZN B8-1, C4-11/-12/-13/-14); NAS1149C0332R REPLACES AN860C10L (ZN A5-1, B1-11/-12/-13/-14, C7-11/-12/-13/-14); NAS1149C0832R REPLACES AN960C816L (ZN A5-1, C1-11/-12/-13/-14); REMOVED D3794-1/-3, AND D3536-25 GASKETS	ZF	18.03.05
G	CORRECTED TOLERANCE ON $\phi 0.500$ THRU HOLE: IS +0.01/-0.000, WAS +0.100/-0.000 (ZN B3-4, B2-5); ADD VIEW TO CONTROL FWD BEND ORIENTATION (ZN D-1-4/-5/-6/-7); UPDATED FINISH OPTIONS; INSIDE OF TUBE NO LONGER SPRAYED WITH LPS-3. REASON: PAR13-276 AND NCR13-2757	MB	13.07.11
F	INCORPORATE DSI 9413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/-3 REPLACES D3535-13/-35 (ZN C8-1); D3794-1/-3 REPLACES D3536-13/-35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL); WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS; CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H8L; REMOVE D2741; QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEO 8133/8157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S263 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN	MM	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	ZF		
CHECKED	MW	DRAWING NO.	REV. H
MFG. APPR.	DD	D2750	SHEET 1 OF 16
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
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2018 OCT 19
3:41:53

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Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread		FAULT CATEGORY Other/Details: _____			

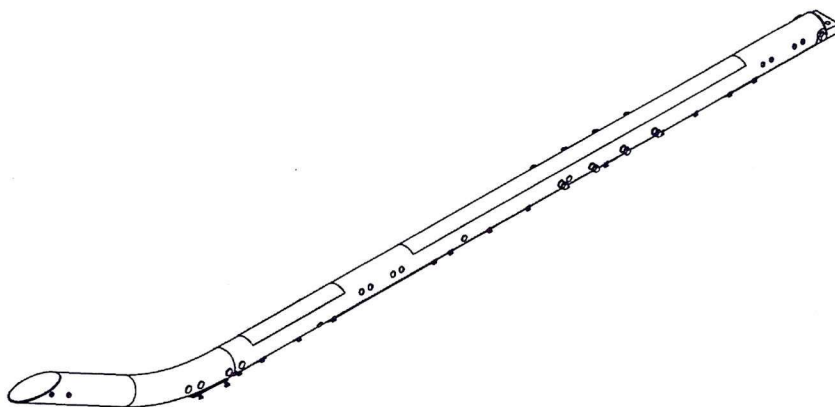
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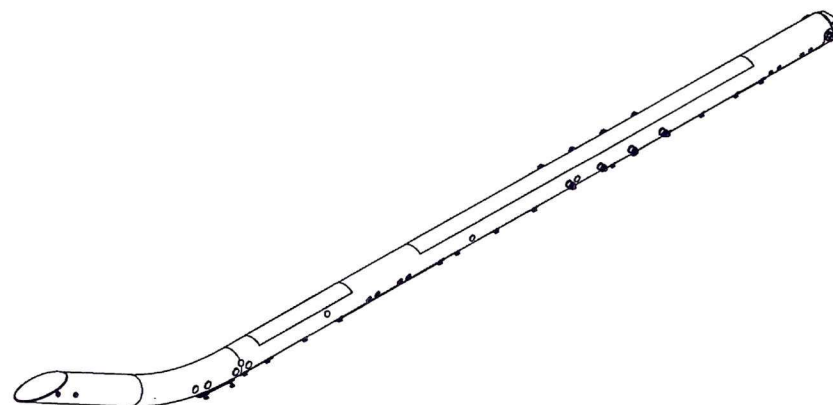
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D2750-041 350 SKIDTUBE ASSEMBLY, LH



D2750-042 350 SKIDTUBE ASSEMBLY, RH

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2018 OCT 19
2018 10 19

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DESIGN	MM	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	ZF		
CHECKED	MW	DRAWING NO. D2750	REV. H
MFG. APPR.	DD	TITLE	SHEET 2 OF 16
APPROVED	NO	350 SKIDTUBE ASSEMBLY	SCALE
DE APPR.	DS-#		NTS
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8 7 6 5 4 3 2 1

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Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

8 7 6 5 4 3 2 1

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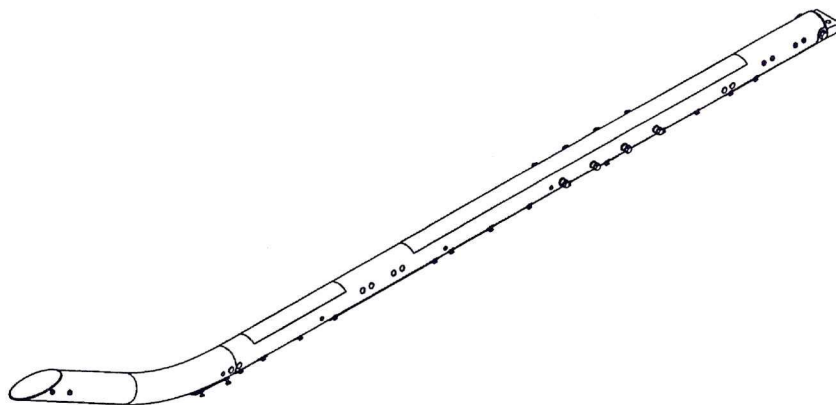
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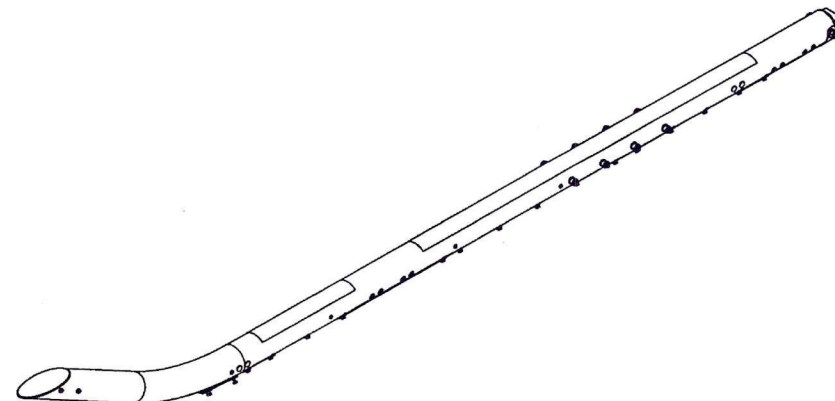
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D2750-043 350 SKIDTUBE ASSEMBLY, LH



D2750-044 350 SKIDTUBE ASSEMBLY, RH

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2018 OCT 19

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CHECKED	MW	DRAWING NO.	REV. H
MFG. APPR.	DD	D2750	SHEET 3 OF 16
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
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8 7 6 5 4 3 2 1

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

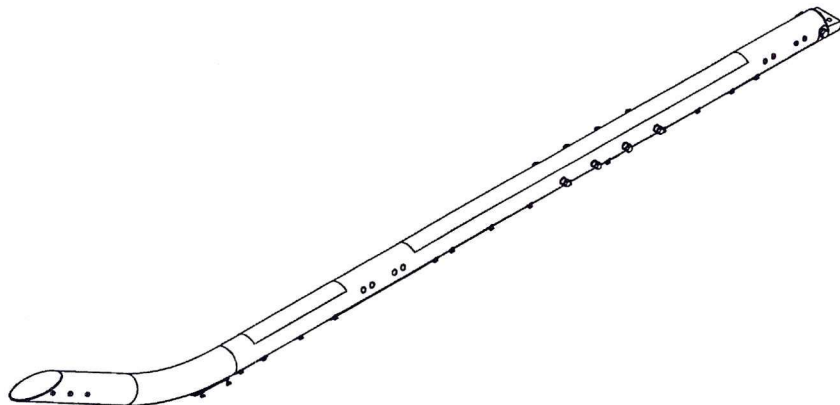
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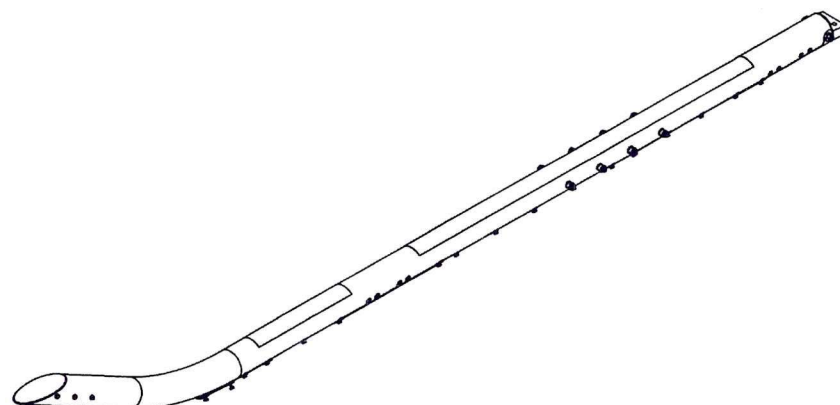
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 **D2750-051 350 SKIDTUBE ASSEMBLY, LH**



 **D2750-052 350 SKIDTUBE ASSEMBLY, RH**

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2018 OCT 19

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DRAWN	ZF		
CHECKED	MW	DRAWING NO. D2750	REV. H
MFG. APPR.	DD	SHEET 4 OF 18	
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
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8 7 6 5 4 3 2 1

D

C

B

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Entered: _____ Date: _____

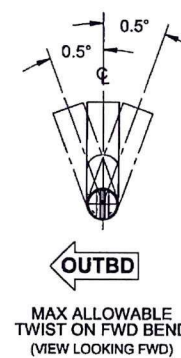
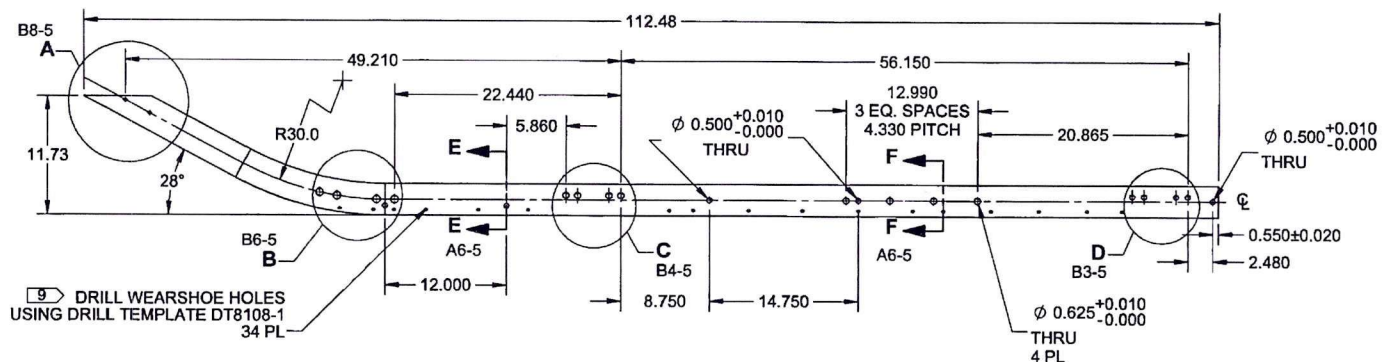


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

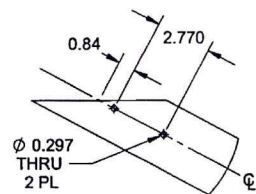
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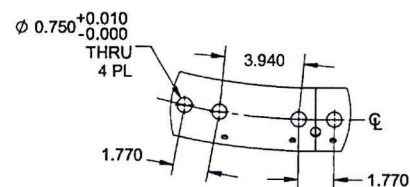
Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



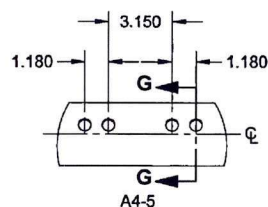
D2750-1 LH SKIDTUBE



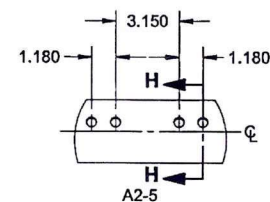
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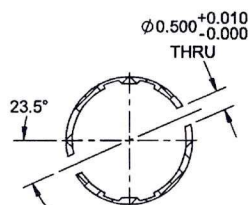
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SCALE 2X



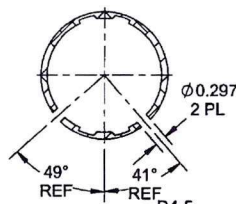
DETAIL C
SCALE 2X



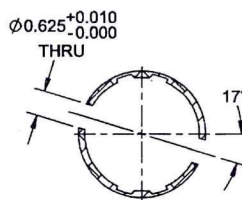
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SCALE 2X



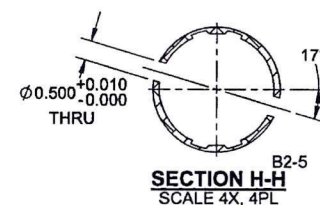
SECTION E-E
SCALE 4X, 2 PL



SECTION F-F
SCALE 4X, 17 PL



SECTION G-G
SCALE 4X, 4 PL



SECTION H-H
SCALE 4X, 4 PL

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2010 OCT 19

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DESIGN	MM
DRAWN	ZF
CHECKED	MW
MFG. APPR.	DD
APPROVED	NO
DE APPR.	DS
DATE	18.03.05

DART AEROSPACE USA, INC.
EUGENE, OR

DRAWING NO. **D2750** REV. H
SHEET 5 OF 16
TITLE **350 SKIDTUBE ASSEMBLY** SCALE NTS

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Entered: _____ Date: _____

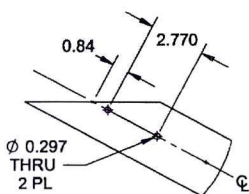
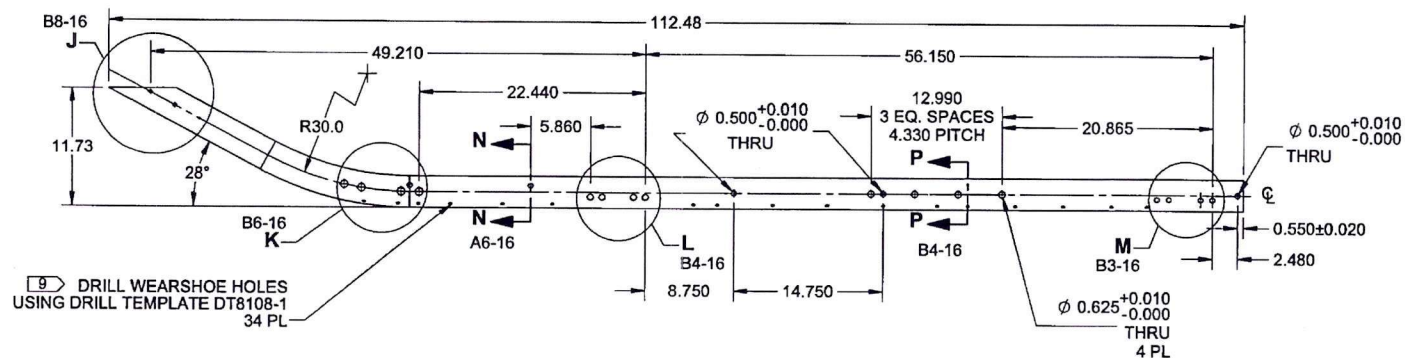


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

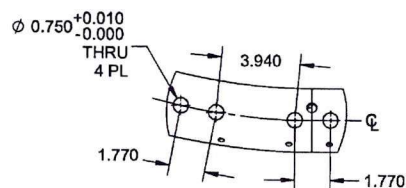
NCR No. _____

Route update only ☐

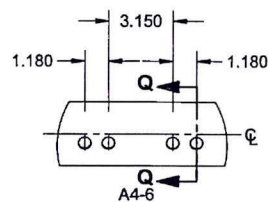
Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



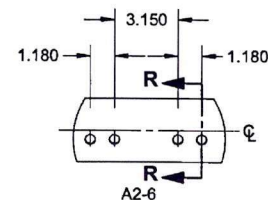
D7-6



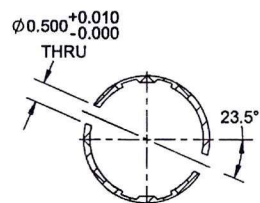
C7-6



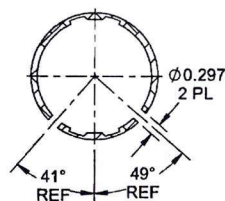
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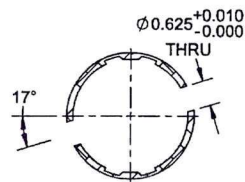
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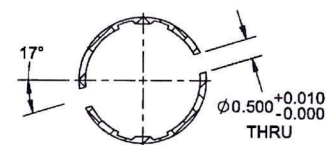
D6-6



D4-6



B4-6



B2-6

RELEASED
2018 OCT 19

DESIGN	MM	DART AEROSPACE USA, INC.	
DRAWN	ZF	EUGENE, OR	
CHECKED	MW	DRAWING NO. D2750	REV. H
MFG. APPR.	DD	SHEET 6 OF 16	
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
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Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

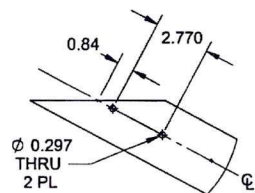
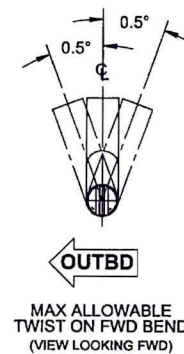
NCR No. _____

Route update only ☐

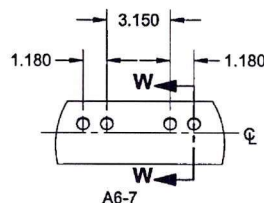
Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

9 DRILL WEARSHOE HOLES
USING DRILL TEMPLATE DT8108-1
34 PL

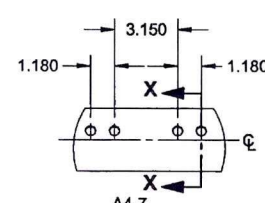
D2750-3 LH SKIDTUBE



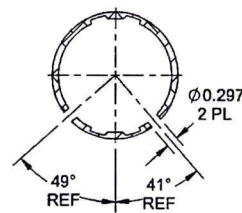
D7-7
DETAIL S
SCALE 2X



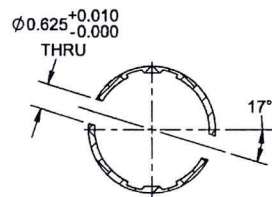
A6-7
DETAIL T
SCALE 2X



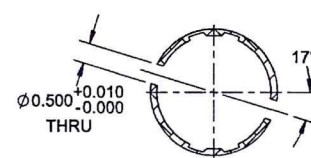
A4-7
DETAIL U
SCALE 2X



D4-7
SECTION V-V
SCALE 4X, 17 PL



B6-7
SECTION W-W
SCALE 4X, 4 PL



B4-7
SECTION X-X
SCALE 4X, 4 PL

APPROVED

DESIGN	MM
DRAWN	ZF
CHECKED	MW
MFG. APPR.	DD
APPROVED	NO
DE APPR.	DS
DATE	18.03.05

DART AEROSPACE USA, INC. EUGENE, OR	
DRAWING NO. D2750	REV. H SHEET 7 OF 16
TITLE 350 SKIDTUBE ASSEMBLY	SCALE NTS
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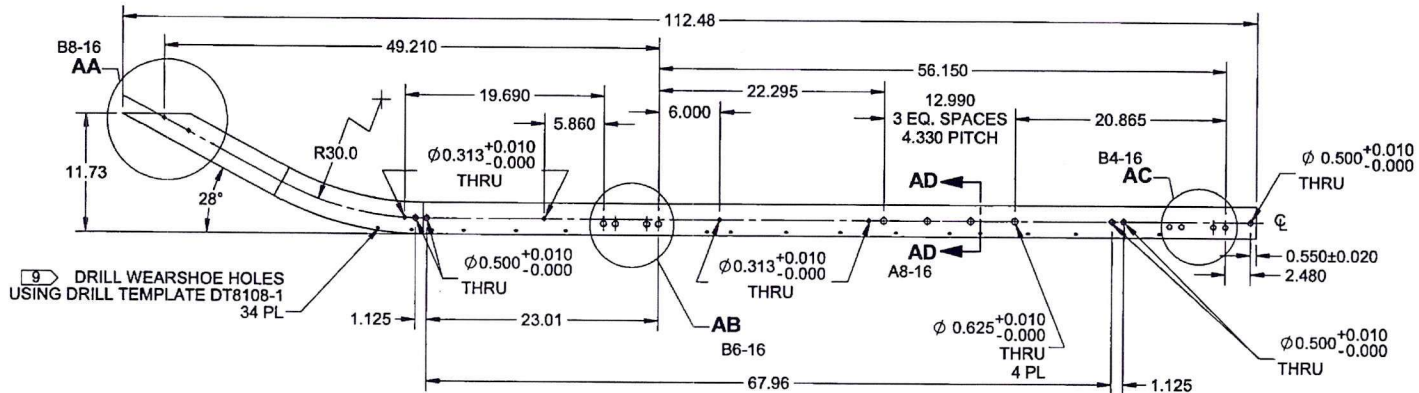


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

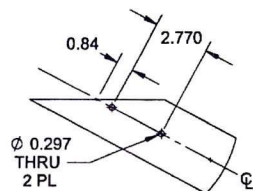
NCR No. _____

Route update only ☐

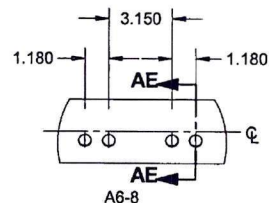
Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



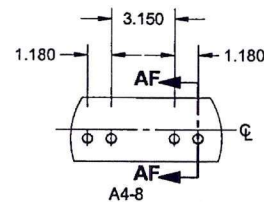
D2750-4 RH SKIDTUBE



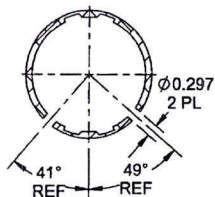
DETAIL AA
SCALE 2X



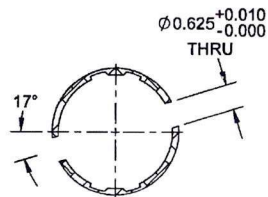
DETAIL AB
SCALE 2X



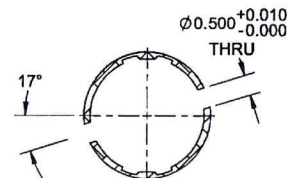
DETAIL AC
SCALE 2X



SECTION AD-AD
SCALE 4X, 17 PL



SECTION AE-AE
SCALE 4X, 4 PL



SECTION AF-AF
SCALE 4X, 4 PL

RELEASED

2018 OCT 19

APPROVED	DESIGN	MM	DART AEROSPACE USA, INC.	
	DRAWN	ZF	EUGENE, OR	
	CHECKED	MW	DRAWING NO.	REV. H
	MFG. APPR.	DD	D2750	SHEET 8 OF 16
	APPROVED	NO	TITLE	SCALE
	DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
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Entered: _____ Date: _____

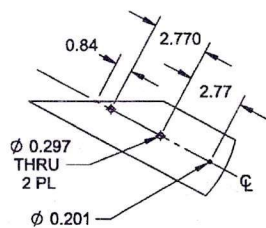
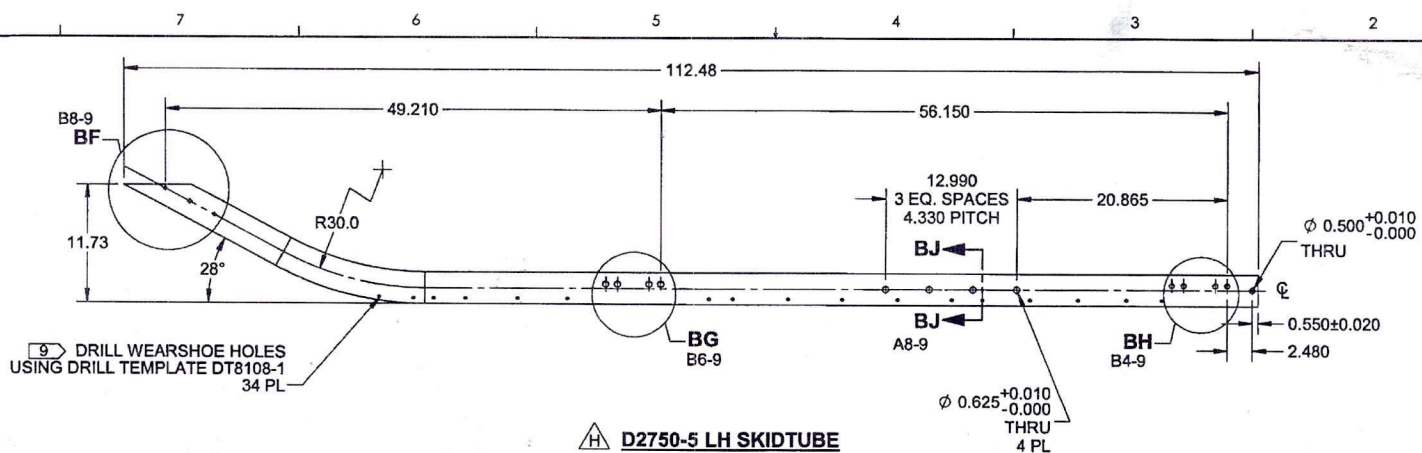


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

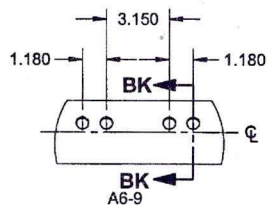
NCR No. _____

Route update only ☐

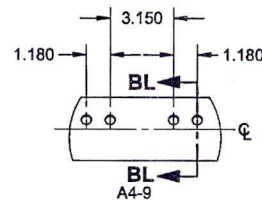
Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QS1042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread		FAULT CATEGORY Other/Details: _____			



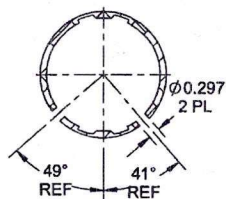
DETAIL BF
SCALE 2X



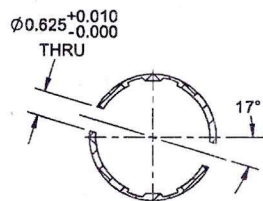
DETAIL BG
SCALE 2X



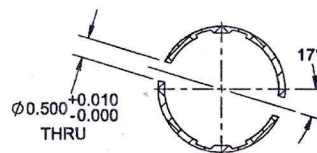
DETAIL BH
SCALE 2X



SECTION BJ-BJ
SCALE 4X, 17 PL



SECTION BK-BK
SCALE 4X, 4 PL



SECTION BL-BL
SCALE 4X, 4 PL

RELEASED
2019 OCT 19

APPROVED

DESIGN	MM
DRAWN	ZF
CHECKED	MW
MFG. APPR.	DD
APPROVED	NO
DE APPR.	DS
DATE	18.03.05

DART AEROSPACE USA, INC.
EUGENE, OR

DRAWING NO. D2750	REV. H
TITLE 350 SKIDTUBE ASSEMBLY	SCALE NTS

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Entered: _____ Date: _____

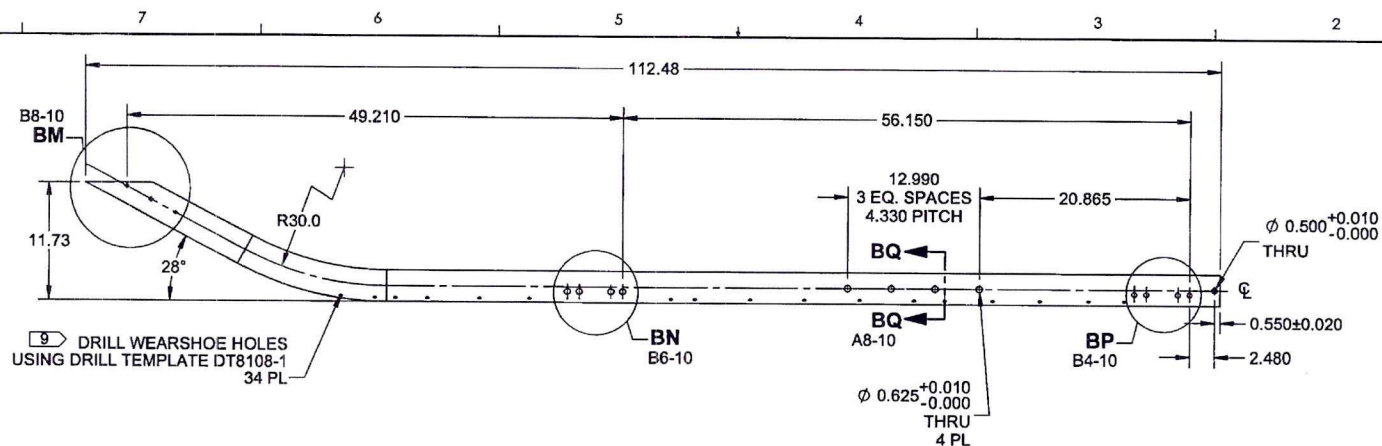


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

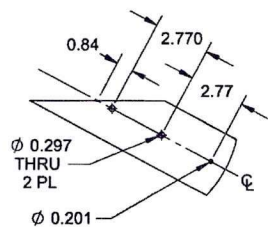
NCR No. _____

Route update only ☐

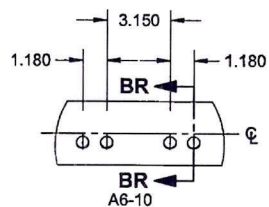
Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QS1042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



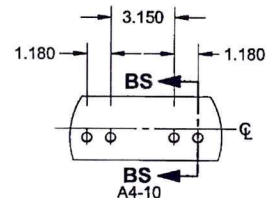
D2750-6 RH SKIDTUBE



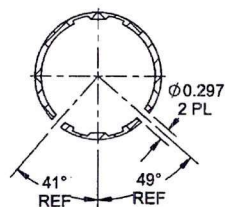
DETAIL BM
SCALE 2X



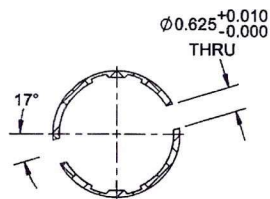
DETAIL BN
SCALE 2X



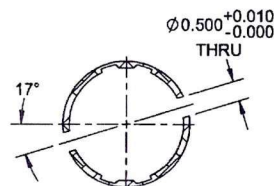
DETAIL BP
SCALE 2X



SECTION BQ-BQ
SCALE 4X, 17 PL



SECTION BR-BR
SCALE 4X, 4 PL



SECTION BS-BS
SCALE 4X, 4 PL

RELEASED
2019 OCT 19

DESIGN	MM	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	ZF		
CHECKED	MW	DRAWING NO. D2750	REV. H
MFG. APPR.	DD	TITLE 350 SKIDTUBE ASSEMBLY	SHEET 10 OF 18
APPROVED	NO	SCALE	NTS
DE APPR.	DS		
DATE	18.03.05		

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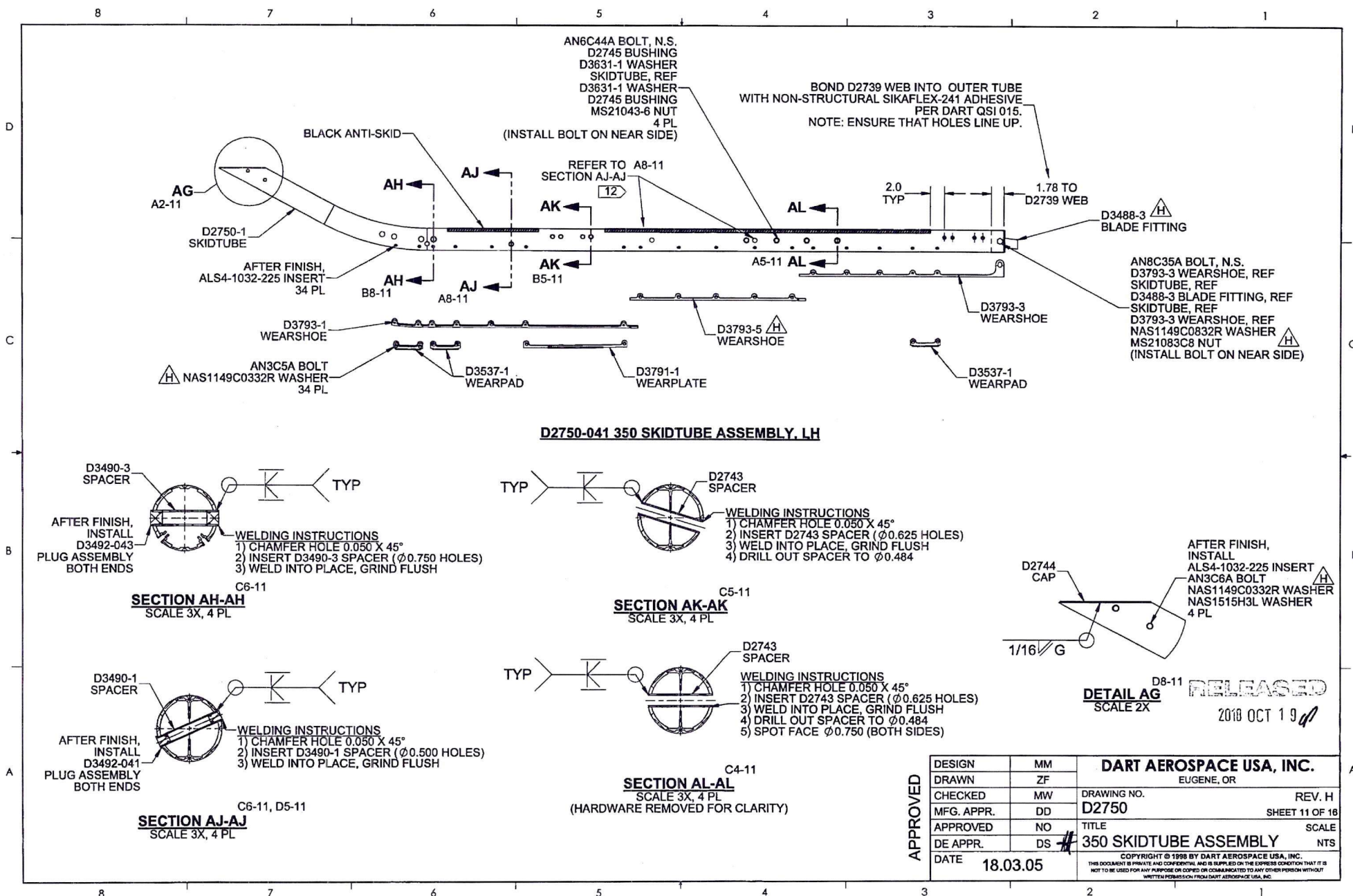


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



Entered: _____ Date: _____

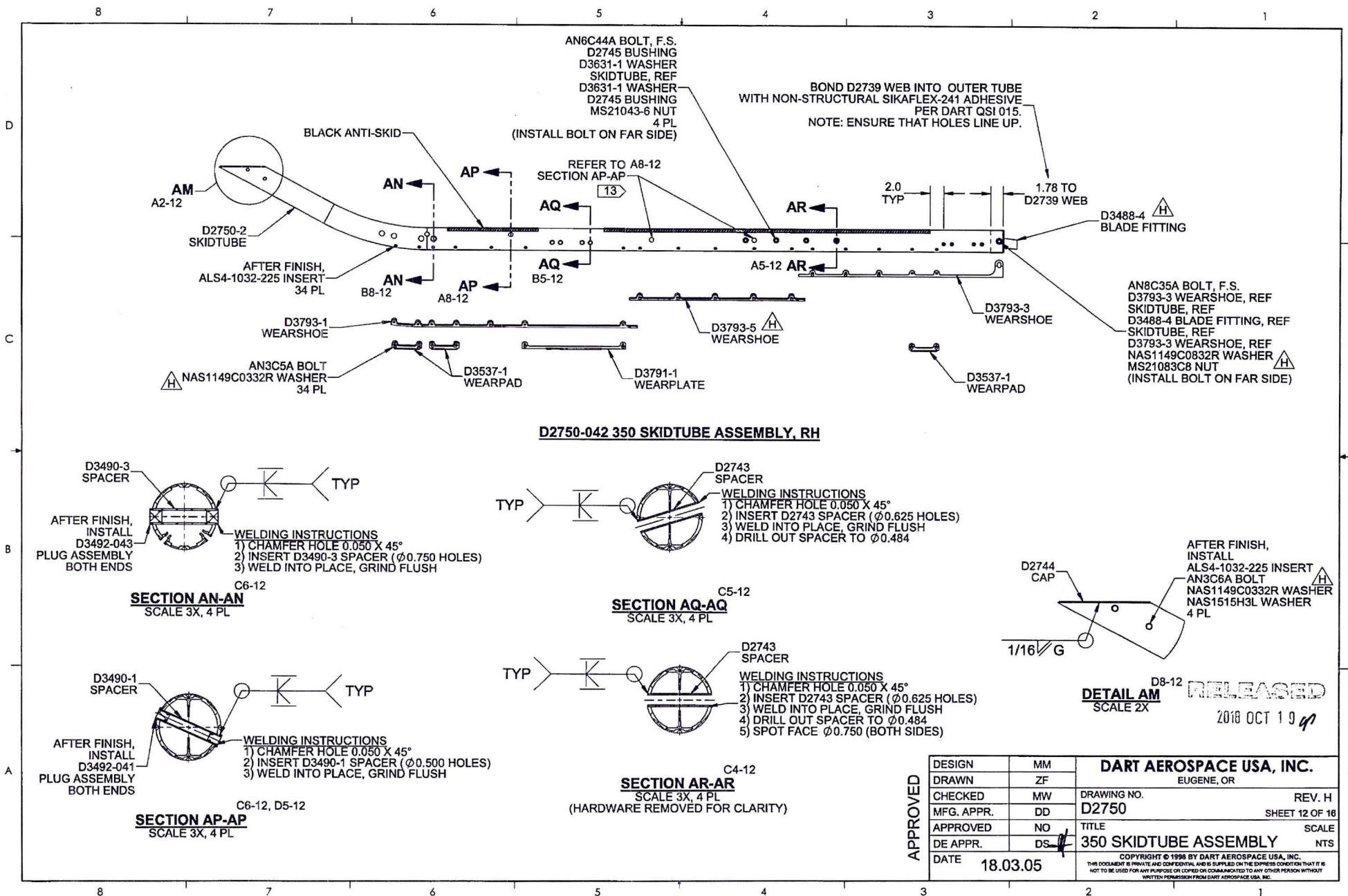


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



Entered: _____ Date: _____

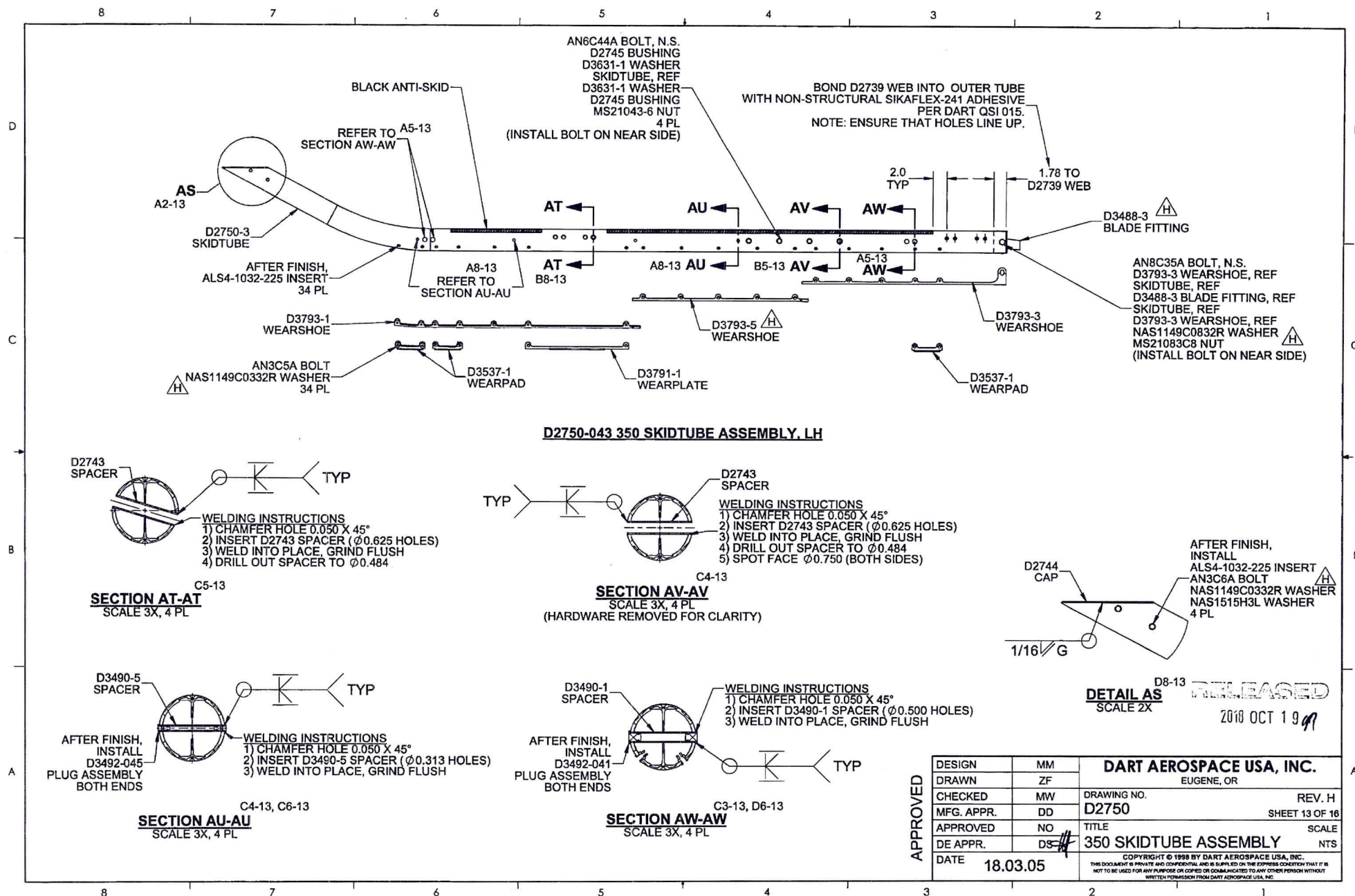


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor		
			QC / QA Coordinator		
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



Entered: _____ Date: _____

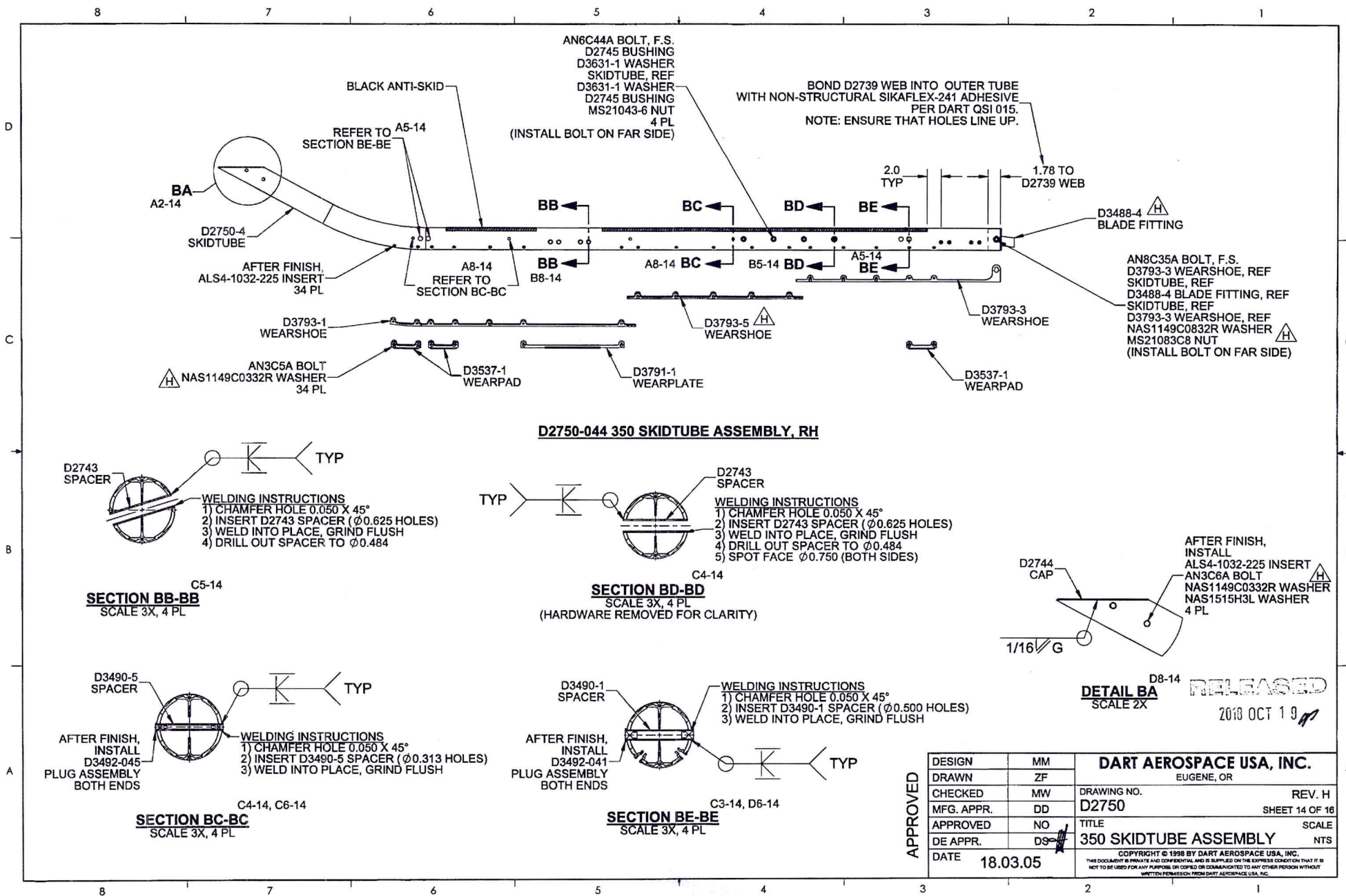


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



APPROVED	DESIGN	MM	DART AEROSPACE USA, INC. EUGENE, OR	
	DRAWN	ZF		
	CHECKED	MW	DRAWING NO.	REV. H
	MFG. APPR.	DD	D2750	SHEET 14 OF 16
	APPROVED	NO	TITLE	SCALE
	DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
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Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

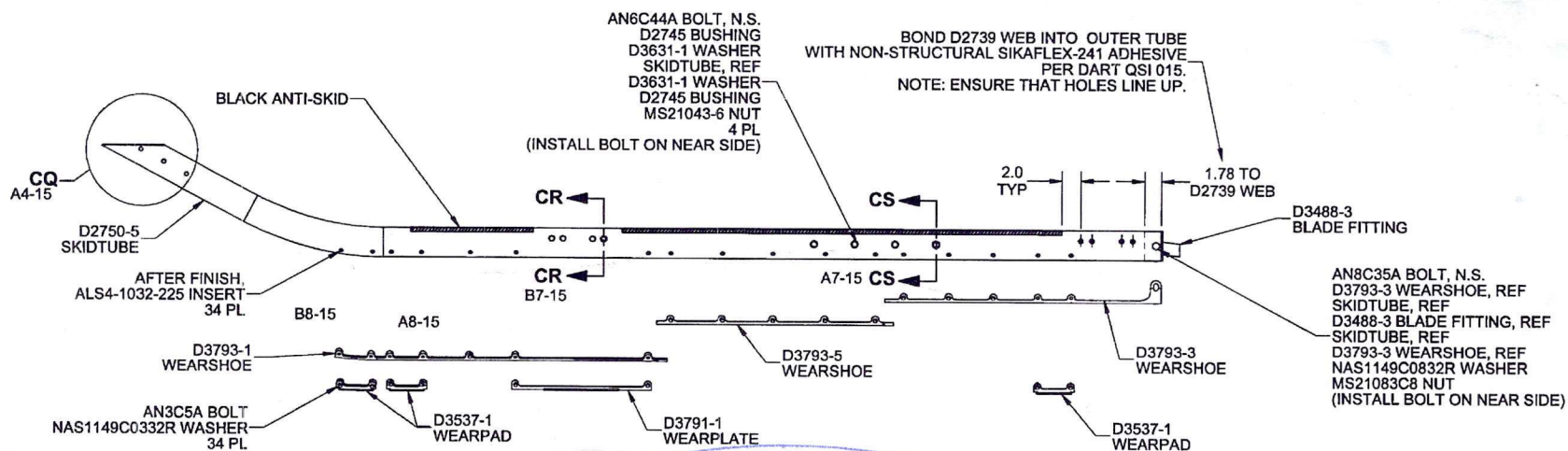
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D

C

B

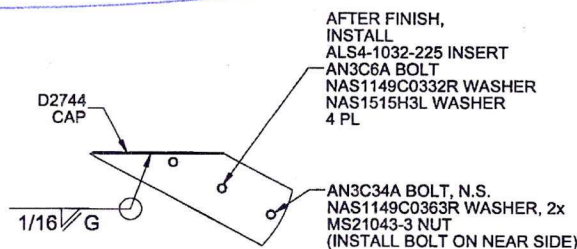
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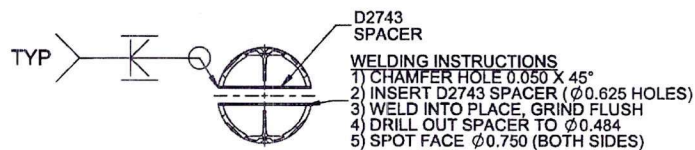
D2750-051 350 SKIDTUBE ASSEMBLY, LH



SECTION CR-CR
SCALE 3X, 4 PL



DETAIL CQ
SCALE 2X



SECTION CS-CS
SCALE 3X, 4 PL
(HARDWARE REMOVED FOR CLARITY)

RELEASED

2018 OCT 19

APPROVED

DESIGN	MM	DART AEROSPACE USA, INC.	
DRAWN	ZF	EUGENE, OR	
CHECKED	MW	DRAWING NO.	REV. H
MFG. APPR.	DD	D2750	SHEET 15 OF 1
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
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Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By Lead hand / Supervisor QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread		FAULT CATEGORY Other/Details:			

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor		
			QC / QA Coordinator		
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details: _____					

Change Record

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Part Number: D350-636-021/-022

Description: SKIDTUBE INSTALLATION LH/RH, STD

[illegible]